

LIST OF MAP UNITS

Qal	Alluvial deposits, undivided
Tt	Tertiary
Mt	Middle Pleistocene rocks
Kd	Recent alluvium, extensively altered
Ks	Siltstone
Kst	Shale
Kstc	Shale, carbonaceous
Kstf	Shale, fossiliferous
Kstg	Shale, greenish
Ksth	Shale, highly fossiliferous
Kstj	Shale, jet black
Kstk	Shale, kaolinitic
Kstl	Shale, lignitic
Kstm	Shale, micaceous
Kstn	Shale, nodular
Ksto	Shale, oolitic
Kstp	Shale, pyritic
Kstq	Shale, quartzitic
Kstr	Shale, resinous
Ksts	Shale, siliceous
Kstt	Shale, tuffaceous
Kstv	Shale, volcanic
Kstw	Shale, waxy
Kstx	Shale, xanthic
Ksty	Shale, yellowish
Kstz	Shale, zoned
Ms	Mesozoic and Paleozoic

CORRELATION OF MAP UNITS

Qal	QUATERNARY
Tt	TERTIARY
Mt	MIDDLE PLEISTOCENE
Kd	CRETACEOUS (C)
Ks	CRETACEOUS
Kst	CRETACEOUS AND JURASSIC
Kstc	CRETACEOUS
Kstf	CRETACEOUS
Kstg	CRETACEOUS
Ksth	CRETACEOUS
Kstj	CRETACEOUS
Kstk	CRETACEOUS
Kstl	CRETACEOUS
Kstm	CRETACEOUS
Kstn	CRETACEOUS
Ksto	CRETACEOUS
Kstp	CRETACEOUS
Kstq	CRETACEOUS
Kstr	CRETACEOUS
Ksts	CRETACEOUS
Kstt	CRETACEOUS
Kstv	CRETACEOUS
Kstw	CRETACEOUS
Kstx	CRETACEOUS
Ksty	CRETACEOUS
Kstz	CRETACEOUS
Ms	MESOZOIC AND PALEOZOIC

SYMBOLS

-----	Contact, approximately located, dotted where concealed
-----	Boundary of study area
*	Geochemical sample site
□	Beryllium = 3 ppm
□	Beryllium > 3 ppm
△	Boron = 100 ppm
△	Boron = 150-200 ppm
△	Boron > 200 ppm

STUDIES RELATED TO WILDERNESS

The Wilderness Act (Public Law 88-371, September 3, 1964) and related acts require the U.S. Geological Survey and the U.S. Bureau of Mines to survey certain areas on Federal lands to determine their mineral resource potential. Results must be made available to the public and be submitted to the President and the Congress. This report presents the results of a geochemical survey of the Western Chichagof-Yakobi Islands Wilderness Study Area in the Tongass National Forest, Alaska. About 45 percent of the study area was established as a wilderness on December 2, 1980, under the Alaska National Interest Lands Conservation Act (P.L. 96-487).

In the course of the U.S. Geological Survey investigations of the Western Chichagof-Yakobi Islands Wilderness Study area, 2,150 bedrock geochemical samples were collected. Samples were analyzed for 31 elements by a wet-chemistry, semi-quantitative spectrographic method (Grimes and Murrain, 1968) and for 4 elements by a dry-chemistry, semi-quantitative spectrographic method (Grimes and Murrain, 1968) and for 4 elements by a dry-chemistry, semi-quantitative spectrographic method (Grimes and Murrain, 1968). Complete analytical data, station coordinates, and a station location map are available in two reports: Johnson, 1982, and Johnson and Elliott, 1984. A map and discussion of the mineral resource potential of the study area is also available (Johnson, Kibbali, and Still, 1982).

Background levels for each element vary for different lithologies in the study area. Because of this and variability introduced from other sources such as sampling technique, analytical variance, and chemical weathering, it is impossible to select a specific analytical level above which values indicate mineralization. Higher values may indicate a greater likelihood of bedrock mineralization, but confidence levels are low for single element high values and results which are not supported by neighboring analytical values for the elements boron and beryllium as well as the location of all 2,150 samples. Multiple symbols for a single element at one sample site represent multiple samples at that site. Although not of economic interest in this area, these elements, along with others, may prove to be pathfinders, or indicators of economic mineralization in other elements.

REFERENCES CITED

Grimes, D. J., and Murrain, A. P., 1968, Direct-current arc and alternating-current spark emission spectrographic field methods for the semi-quantitative analysis of geologic materials: U.S. Geological Survey Circular 591, 6 p.

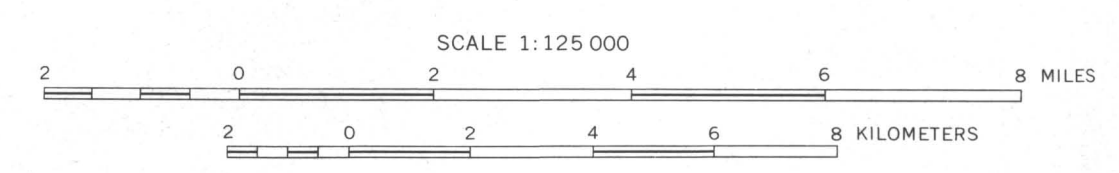
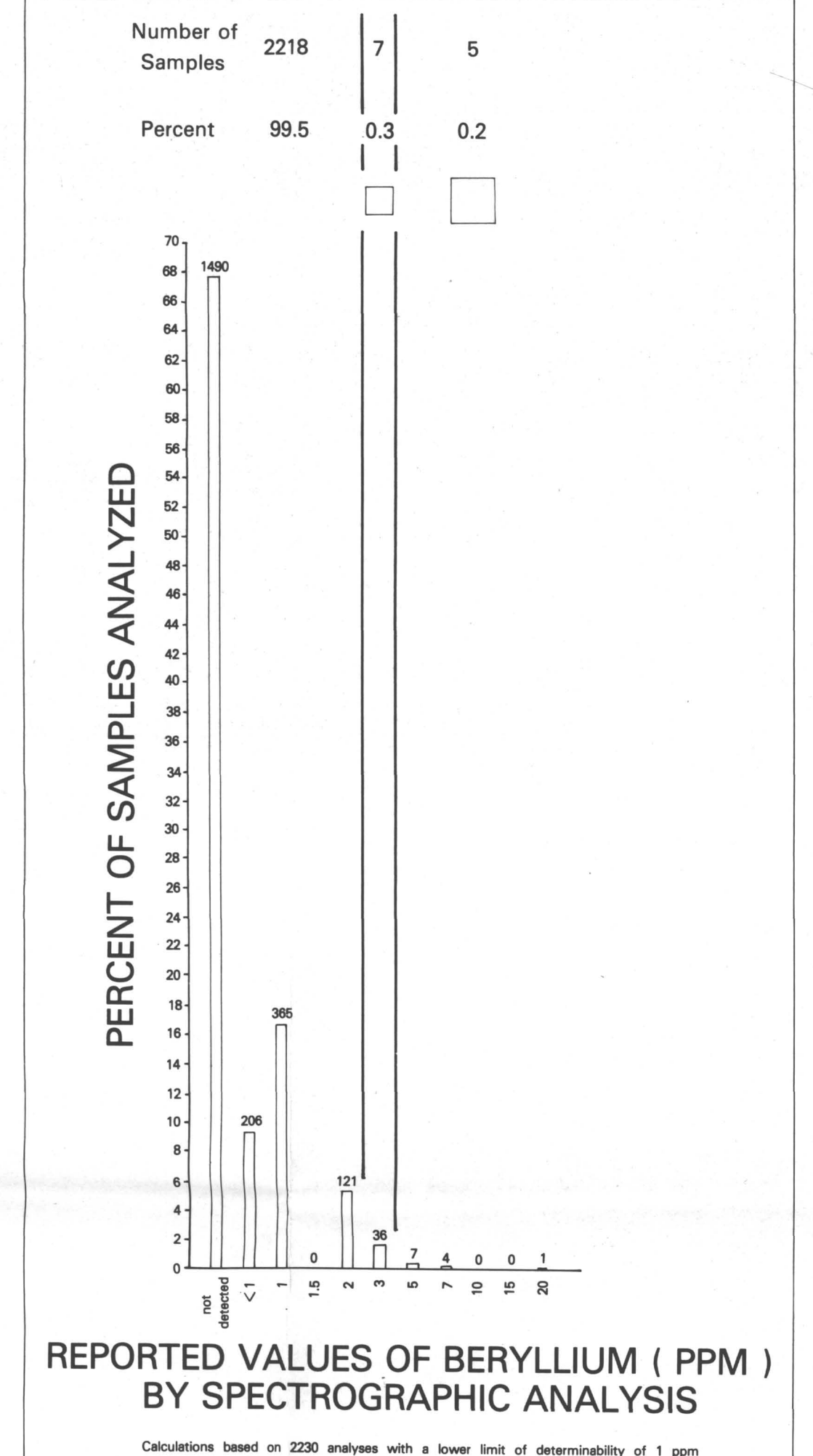
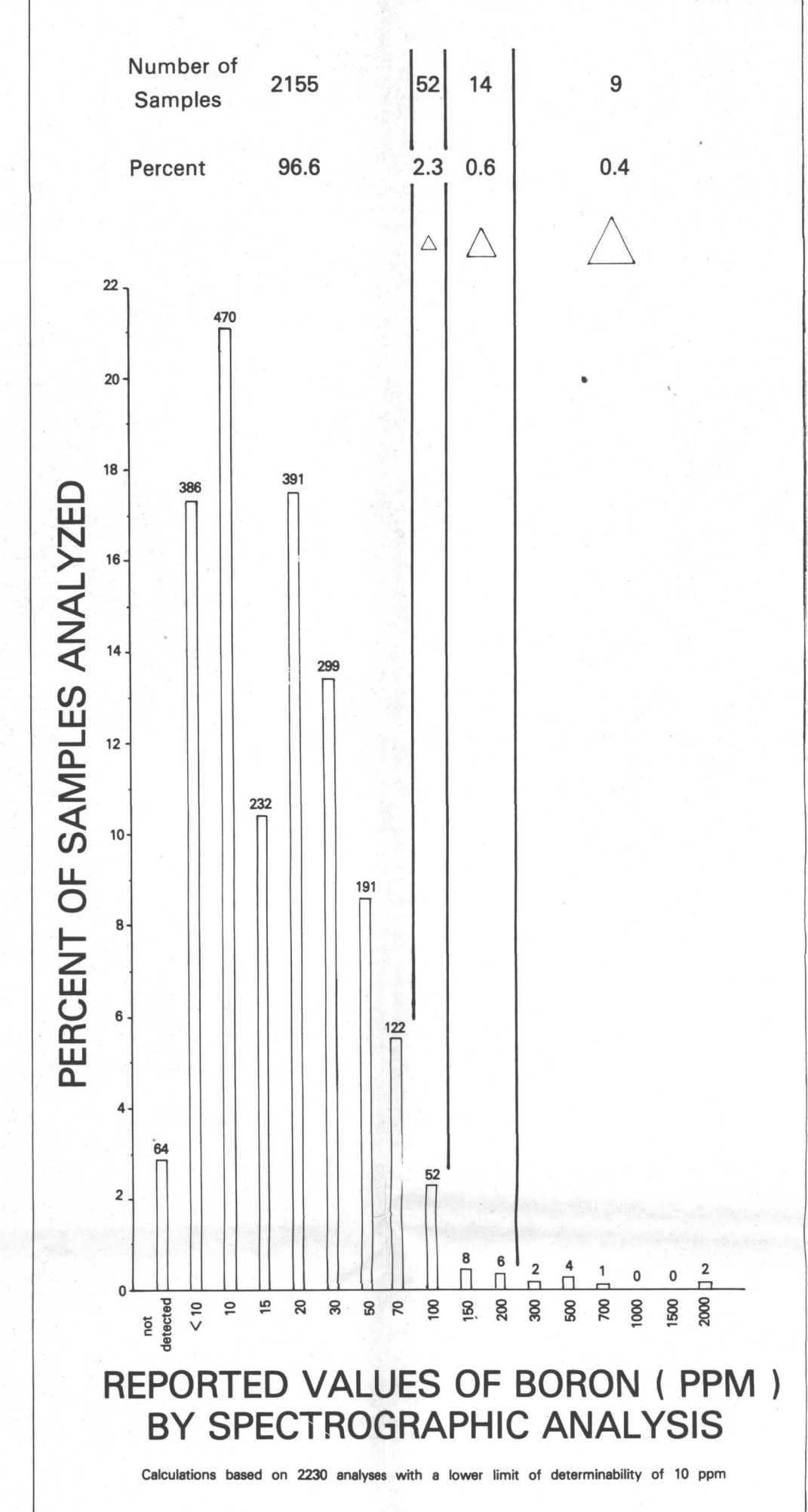
Johnson, R. K., 1982, Regional map containing trace element data for bedrock geochemical samples from the western Chichagof-Yakobi Islands Wilderness Study Area, southeastern Alaska: National Technical Information Service Report No. USGDS-OS-82-005, computer tape, 1 reel.

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MAP SHOWING THE DISTRIBUTION AND ABUNDANCE OF BORON AND BERYLLIUM IN BEDROCK SAMPLES, WESTERN CHICHAGOF AND YAKOBI ISLANDS WILDERNESS STUDY AREA, SOUTHEASTERN ALASKA

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This map is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards, but the stratigraphic nomenclature has been approved provisionally.